



RELEASE NOTES

# Solidigm™ Storage Tool - CLI

March 2024

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## Solidigm™ Storage Tool Revision History

Revision	Software Revision	Description	Date
001	1.0	This is the first revision of the Solidigm™ Storage Tool (SST). This version of the tool contains below fixes; and the functionality of many current tools, see the User Guide for more information, with support for Intel® / Solidigm™ client and data center SSD.	March 2022
002	1.1	This version of the tool contains following changes: <ul style="list-style-type: none"> <li>This revision adds a firmware update for 670p, 665p, 660p, 760, Pro 7600p, Pro 6000p, E6100p P3100 and P4101.</li> <li>CVE document update (see Solidigm Advisory SOLIDIGM-SA-00563)</li> </ul>	May 2022
003	1.1	Documentation Correction	May 2022
004	1.2	Firmware update for D7-P5510, D5-P5316, D3-S4520 / S4620	July 2022
005	1.3	This version of the tool contains following changes: <ul style="list-style-type: none"> <li>Firmware update for D3-S4510 / S4610</li> <li>Added ability to save Identify data as binary</li> <li>Various bug fixes and small enhancements</li> </ul>	September 2022
006	1.4	This version of the tool contains following changes: <ul style="list-style-type: none"> <li>Added ability for workload tracker</li> <li>Ended ESXi 6.x support due to the end of support from VMWare</li> <li>Various bug fixes and small enhancements</li> </ul>	December 2022
007	1.5	This version of the tool contains following changes: <ul style="list-style-type: none"> <li>Firmware update for D3-S4510 / S4610</li> <li>Various bug fixes and small enhancements</li> </ul>	January 2023

008	1.6	This version of the tool contains following changes: <ul style="list-style-type: none"> <li>Firmware update for P41 Plus</li> </ul>	February 2023
009	1.7	This version of the tool contains following changes: <ul style="list-style-type: none"> <li>Firmware update for D3-S4520 / S4620 and D7-P5520 / P5620</li> <li>Added ability to bypass full system device scan when user provides device path</li> <li>Fixed some SST command issues on Microsoft NVMe Inbox Driver</li> <li>Various bug fixes and small enhancements</li> </ul>	March 2023
010	1.8	This version of the tool contains following changes: <ul style="list-style-type: none"> <li>Fixed compatibility issue for Latency Monitor on Solidigm NVMe driver</li> <li>Enabled additional OCP Smart attributes</li> </ul>	May 2023
011	1.9	This version of the tool contains following changes: <ul style="list-style-type: none"> <li>Firmware update for D3-S4510 / S4610, D5-P5316 and D5-P5430</li> <li>Various bug fixes and small enhancements</li> </ul>	July 2023
012	1.10	This version of the tool contains following changes: <ul style="list-style-type: none"> <li>Firmware update for D7-P5510</li> <li>Added support for ESXi 8.0 Update 1</li> <li>Fixed the issue in files getting updated after smart logs on Linux system</li> <li>Removed reboot requirement for installing VIB in ESXi</li> <li>Various bug fixes and small enhancements</li> </ul>	September 2023
013	1.11	This version of the tool contains following changes: <ul style="list-style-type: none"> <li>Firmware update for selected D7-P5510 drives</li> <li>Firmware update for P5520/P5620</li> <li>Firmware update for S4520/S4620</li> <li>Updated LSI MegaRAID library for newer cards support</li> </ul>	December 2023
014	1.12	This version of the tool contains following changes: <ul style="list-style-type: none"> <li>Firmware update for selected D7-P5810</li> <li>Fix for firmware update not available for few D7-P4511 models</li> <li>Fixed issue of devices enumerating as SCSI in RHEL 7</li> <li>Added support for new models for various products</li> <li>Various small bug fixes and enhancements</li> </ul>	March 2024

Note: If you purchased your Intel® / Solidigm™ SSD from an OEM, your firmware version may have a different naming sequence. Contact your local OEM representative for the latest firmware revisions.

## Solidigm Data Center SSD Products Revision History

### 1 Solidigm™ D7-P5810

Date	Revision	Description
March 2024	1CV10200	1.6TB SKU only <ul style="list-style-type: none"> <li>Mitigates the following issues besides some other minor/corner case fixes:</li> <li>Support for 1.6TB SKU</li> </ul>

### 2 Solidigm™ D7-P5520 / P5620 (formerly Intel®)

Date	Revision	Description
December 2023	9CV10450	<ul style="list-style-type: none"> <li>Mitigates the following issues besides some other minor/corner case fixes:               <ul style="list-style-type: none"> <li>NVMe-MI Basic Throttle State Value May Persist After Exiting Throttling State</li> <li>Power Management Set Feature Command sent Over NVMe MI Causes Drive to go into Disable Logical Mode</li> <li>Vendor Unique Feature Identifier C6h Not Reflecting Power Mode Setting Changes Made with Feature Identifier 02h</li> <li>Drive May Fail to enumerate During Drive Boot Up Sequence</li> <li>PCIe Link up Sequence May Fail During AC/DC Cycle</li> </ul> </li> </ul>
March 2023	9CV10410	<ul style="list-style-type: none"> <li>Mitigates the following issues besides some other minor/corner case fixes:               <ul style="list-style-type: none"> <li>Non-Graceful Shutdown Counter Not Incrementing During Unsafe Shutdowns within DEh Log Page</li> <li>UEFI Driver Health Status GetHealthStatus Returning Unsupported</li> <li>PCIe Unsupported Request Errors Observed by Host during Drive Power Cycle</li> <li>Drive De-Enumeration During PCIe Link Up Sequence</li> <li>Intermittent Failure During Drive Boot Sequence Causes No Drive Attached</li> <li>Incorrect NVMe MI Response Message Status During Drive's Time to Ready</li> </ul> </li> </ul>

### 3 Solidigm™ D7-P5510 (formerly Intel®)

Date	Revision	Description
December 2023	JCV104044	OPAL drives only: <ul style="list-style-type: none"> <li>Mitigates the following issues besides some other minor/corner case fixes:               <ul style="list-style-type: none"> <li>Allow the Opal drive to undergo an MR3 update without the drive becoming locked</li> <li>Adjustments to wear levelling mechanism</li> </ul> </li> </ul> Mitigate issue that cause drive to return last data written to NAND

September 2023	JCV10400	Non-OPAL drives only: <ul style="list-style-type: none"> <li>Mitigates the following issues besides some other minor/corner case fixes:                             <ul style="list-style-type: none"> <li>Environment that does not Implement Required Command Ordering Enforcement may cause drive to return last data written to NAND</li> <li>Drive may encounter bad ctx 3014 due to wear leveling</li> </ul> </li> </ul>
July 2022	JCV10300	<ul style="list-style-type: none"> <li>NAND Read Disturb Impact Due to Unique NAND Background Activity Fix</li> <li>BM459 Assert No Available Band/Erase Block Fix</li> <li>Other various fixes and improvements</li> </ul>

#### 4 Solidigm™ D5-P5430

Date	Revision	Description
July 2023	6CV10110	<ul style="list-style-type: none"> <li>Mitigates the following issues besides some other minor/corner case fixes:                             <ul style="list-style-type: none"> <li>Environment that does not Implement Required Command Ordering Enforcement may cause drive to return last data written to NAND</li> <li>Host OS fails to boot with the Vendor Defined Firmware option</li> </ul> </li> </ul>

#### 5 Solidigm™ D5-P5316 (formerly Intel®)

Date	Revision	Description
July 2023	ACV10340	<ul style="list-style-type: none"> <li>Mitigates the following issues besides some other minor/corner case fixes:                             <ul style="list-style-type: none"> <li>Environment that does not Implement Required Command Ordering Enforcement may cause drive to return last data written to NAND</li> <li>PCIe unsupported request errors observed by host during drive power cycle</li> </ul> </li> </ul>
July 2022	ACV10310	<ul style="list-style-type: none"> <li>Add additional support for OPAL 2.0, NVMe 1.4c, NVMe-MI 1.1c, and OCP 0xC0 Log Page</li> </ul>

#### 6 Solidigm™ D3-S4520 / S4620 (formerly Intel®)

Date	Revision	Description
December 2023	7CV10130	<ul style="list-style-type: none"> <li>Mitigates the following issues besides some other minor/corner case fixes:                             <ul style="list-style-type: none"> <li>SMART return status 2CF4H, and SMART attribute AFh and EBh = 1 after ~2 years storage without power, indicating PLI capacitor test failure (U.2 FF only)</li> <li>Drive did not correctly throttle when end of life defect threshold was reached</li> </ul> </li> </ul>

- Unable to format and possible de-enumeration during installing image operation containing crypto scramble command

March 2023	7CV10120	<ul style="list-style-type: none"> <li>• Mitigates the following issues besides some other minor/corner case fixes: <ul style="list-style-type: none"> <li>• SMART attribute AFh and EBh was going to 1 after ~2years of storage without power, when the PLI capacitor was in fact healthy</li> <li>• A non-warranty SMART attribute C5h (pending sector count) was increasing in a corner case scenario</li> </ul> </li> </ul>
July 2022	7CV10111	<ul style="list-style-type: none"> <li>• Mitigates the following issues besides some other minor/corner case fixes: <ul style="list-style-type: none"> <li>• Command timeouts CI054, sometimes followed by ASSERT_SR002 and The SATA link going down.</li> <li>• AFh Smart attribute accidentally drops from 100 to 1 upon power on or power cycle. False failure of the cap test. However, nothing is/was wrong with the capacitor.</li> <li>• SMART attribute B7h SATA downshift counter not updating accurately when a SATA downshift occurs.</li> <li>• SSD warm reboot issue in RAID mode: BIOS hangs and drive not enumerating after OS install and warm reset in RAID mode</li> </ul> </li> </ul>

## 7 Solidigm™ D3-S4510 / S4610 (formerly Intel®)

Date	Revision	Description
July 2023	XCV10165 (2.5")	<ul style="list-style-type: none"> <li>• Follow up fix for SMART attributes (AFh, EBh) incorrectly triggered after long-term storage (Only 2.5" SKUs are impacted)</li> <li>• SMART return status fix</li> </ul>
January 2023	XCV10160 (2.5")	<ul style="list-style-type: none"> <li>• Mitigates the following issues: <ul style="list-style-type: none"> <li>• SMART attributes (AFh, EBh) incorrectly triggered after long-term storage (Only 2.5" SKUs are impacted)</li> </ul> </li> </ul>
September 2022	XC311151 (M.2) XCV10151 (2.5")	<ul style="list-style-type: none"> <li>• Mitigates the following issues: <ul style="list-style-type: none"> <li>• Occasional IO timeout under heavy workloads potentially leading to drive drops</li> </ul> </li> </ul>

## 8 Solidigm™ DC P3100 (formerly Intel®)

Date	Revision	Description
May 2022	119D	<ul style="list-style-type: none"> <li>• Mitigates security vulnerability (see Solidigm Advisory <a href="#">SOLIDIGM-SA-00563</a>)</li> </ul>

## 9 Solidigm™ DC P4101 (formerly Intel®)

Date	Revision	Description
May 2022	009D	<ul style="list-style-type: none"> <li>• Mitigates security vulnerability (see Solidigm Advisory <a href="#">SOLIDIGM-SA-00563</a>)</li> </ul>

## Solidigm Client SSD Products Revision History

### 1. Solidigm™ P41 Plus

Date	Revision	Description
February 2023	002C	<ul style="list-style-type: none"><li>• Fixes possible early disablement of DSLC</li><li>• Fixes SMART Health info corruption and NDA that occasionally occur due to unexpected power loss</li><li>• Improves drive power on to ready time during certain rebuild conditions after unexpected power loss</li><li>• Corrects Verify Command missing in NVMe Commands Supported and Effects Log as reported by drive</li><li>• Fixes occasional drive hang experienced during OS imaging process in WinPE environment</li></ul>

### 2. Solidigm™ 660p (formerly Intel®)

Date	Revision	Description
May 2022	005C	<ul style="list-style-type: none"><li>• Potential BSOD during Power State Transition</li><li>• Mitigates security vulnerability (see Solidigm Advisory <a href="#">SOLIDIGM-SA-00563</a>)</li></ul>

### 3. Solidigm™ 665p (formerly Intel®)

Date	Revision	Description
May 2022	002C	<ul style="list-style-type: none"><li>• Mitigates security vulnerability (see Solidigm Advisory <a href="#">SOLIDIGM-SA-00563</a>)</li></ul>

### 4. Solidigm™ 670p (formerly Intel®)

Date	Revision	Description
May 2022	003C	<ul style="list-style-type: none"><li>• Fix to thermal throttling Flow</li><li>• Fix for Null pointers</li><li>• Block SID Fix</li><li>• Mitigates security vulnerability (see Solidigm Advisory <a href="#">SOLIDIGM-SA-00563</a>)</li></ul>

### 5. Solidigm™ 760p (formerly Intel®)

Date	Revision	Description
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May 2022      006C      • Mitigates security vulnerability  
(see Solidigm Advisory [SOLIDIGM-SA-00563](#))

## 6. Solidigm™ Pro 7600p (formerly Intel®)

Date	Revision	Description
May 2022	006P	• Mitigates security vulnerability (see Solidigm Advisory <a href="#">SOLIDIGM-SA-00563</a> )

## 7. Solidigm™ Pro 6000p (formerly Intel®)

Date	Revision	Description
May 2022	132P	• Mitigates security vulnerability (see Solidigm Advisory <a href="#">SOLIDIGM-SA-00563</a> )

## Solidigm Other SSD Products Revision History

### 1. Solidigm™ E 6100p (formerly Intel®)

Date	Revision	Description
May 2022	006E	• Mitigates security vulnerability (see Solidigm Advisory <a href="#">SOLIDIGM-SA-00563</a> )

## List of Solidigm SSD Products

Please check all supported Solidigm™ SSDs (formerly Intel®) in the following link:

<https://www.solidigm.com/us/en/support-page/product-doc-cert/ka-00099.html>